

# **On a Hair of Europeans Collection Exhibited in the Anthropology Gallery of the Trocadero**

**by Doctor Paul Topinard**

(Secretary General, 1882, Anthropology Society of Paris)

Robert K. Stevenson: Translator and Editor



Ethnographic Museum of the Trocadero

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**by Doctor Paul Topinard**

ANTHROPOLOGY SOCIETY OF PARIS  
Meeting of January 16, 1879

Before parting with the fine hair of Europeans collection that I shall soon be lending to the Exposition, I wish, messieurs, to share with you certain observations of mine which the various hair samples have inspired.

Let me begin by addressing the more or less spirally coiled aspect. The first division of hair, from this point of view, dates back to Bory de Saint-Vincent, who allowed for smooth hair and woolly hair. Woolly hair characterizes the Negro, and smooth hair the rest of mankind; but, as it is the white who is the most opposite to the Negro, smooth hair came to be regarded as the characteristic of white. Soon afterwards—and I do not know who the author was—the term synonymous with *straight* came into use. That’s where science was at the time when the *Instructions* of our Society first made their appearance. Europeans were the highest expression of straight hair. The Society, only occupying itself with characteristics, took care to describe the various kinds: it presented the differences observed in hair that is straight, wavy, ripply, curly, frizzy, and woolly; the former are rectilinear, the latter form a great number of ringlets, while others are intermediate in nature. It was such descriptions that appeared in the work of Doctor Pruner-Bey, who validated the results obtained earlier by Weber in Germany and Brown at Philadelphia. It was proven that in the yellow races and their derivatives hair is cylindrical, stiff, hard, and similar to the coarse hair comprising the tail of a horse; on the other hand, it is flattened in all the woolly-haired races; and finally, it exhibits an intermediate shape in the European race, Australian aborigines, etc.

Straight hair is therefore the first category of hair, and no other; in the yellow races only is it characteristic of the rectilinear course that the hair takes. The second category meriting a designation is *wavy*, which characterizes the hair of the European race, while *frizzy* describes the hair of dark races that do not have woolly hair. After the appearance of Doctor Pruner-Bey’s findings, notwithstanding the earlier stipulated usages, the designation *straight* was retired as a descriptive term for the hair of Europeans.

The hair samples that I shall show you are proof that I am on solid ground for promoting the preceding categorization. In anthropology, which concerns itself with the living or with skulls, one does not consider when investigating qualities, and with good reason, but the average. With the European this average with respect to hair is unquestionably the wavy state. However, the fluctuations around this average are considerable, for a certain number of European hair samples are straight in the same sense that the designation *straight* means, while others are curly or frizzy (otherwise said to be very coiled up in spirals). All these intermediate forms can be observed in the six or seven hair samples that I have brought today to show you. Here are some, messieurs, that are even more than frizzy; if you closely examine several of these hairs that have been pulled apart, most assuredly you will see that they do not evidence five or six spiral turns, but rather from ten to twenty. Indeed, some of these spirals make a complete turn that barely measures 7 or 8 millimeters in length. Now, we often speak of the hair of the Negro in terms of how much it can be stretched. In fact, you are well aware that the diameter of ringlets of woolly hair varies with the degree of *Negroidism*, if I may so express myself. Bushmen, for example, have ringlets which measure 2 to 4 millimeters in diameter. Kaffirs and the Guinean Negroes have ringlets measuring 4 to 8 millimeters, while mulattoes have ringlets 1 or more centimeters in length. I mention all this in order to make the following point: these exclusively European hair samples I've brought today show how difficult it is for one to trace with the naked eye the exact line of demarcation between woolly hair and the state that precedes frizzy hair, and it therefore should be apparent that, in order to accurately categorize certain hair samples of Europeans, one must search for a word that does not exist, because one cannot see to employ the designation *woolly* in this instance. Before quitting this subject, I want to point out to you that in the varieties of hair that you now behold, the hair at times differs along its length; sometimes it is simply wavy in one part of its extent and then becomes frizzy, or vice versa. Can the microscope provide an explanation for these alternations and differences? I myself do not yet know the answer.

The next area of investigation upon which I wish to draw your attention deals with modifications of hair color due to the milieu. Here, messieurs, is hair that is brown on the half that adhered to the scalp, but reddish blond on its free half; this latter part was exposed to the air and sun. Now, we do not know how far this alteration is able to proceed, and one is right to wonder if, given a climate other than the north in which the person keeps his head hardly ever covered, the hair might not completely change its color. Of course, any hypothesis that one makes for an individual would also apply to all others of his race. Here I am now holding up two locks of hair, both white from old age. But, this first one belonged to a high society lady who had taken care of her head; as you can see, the hair is silver-white in color. This other lock belonged to a peasant who worked outdoors; it is yellow. This

alteration of the hair by the milieu is a common thing and is well known by those engaged in today's prosperous hairdressing business.

Having just mentioned the hairdressing business reminds me to encourage you to visit, if possible, my collection of Chinese hair samples currently on display at the Exposition; they present the complete gamut from jet-black to flaxen blond and fire red. More or less repeated applications of hydrogen peroxide lotions were the cause. Interest in this fact comes from the relatively frequent descriptions provided by explorers of brown, blond, and above all red hair in races whose hair is known to be naturally black—for example, among the Australian aborigines, Papuans, and Negroes of Africa. There are other causes that are capable of explaining these abnormal colorations, such as complete or incomplete albinism; however, the use by savage tribes of lotions and pomades that discolor (intentionally or unintentionally) a tribesman's hair must never be lost sight of whenever you find yourself in the presence of these contradictory cases.

The final point I wish to bring up pertains to the fading of hair that occurs in old age. It is generally acknowledged that a single hair fades by degrees from the tip to its root. At other times, it appears, the fading takes place in blocks which ultimately become confluent. Here is the third way: the hair initially emerges from the scalp dark-colored, but little by little it grows gray and finally white. The decoloration occurs in some subtle way in spite of the continued production of hair, as the tip of the hair preserves its integrity. In fact, on this long hair that I'm now holding 30 to 35 centimeters of its free part is quite black, 30 to 35 centimeters of its adherent part is white, and a small intermediate zone is turning gray. Professor Bert, incidentally, has declared that this is the first evidence of this kind of decoloration pattern that he has ever encountered.

## DISCUSSION

**Professor ANDRÉ SANSON.** Every time that I have meant to talk about *woolly* hair, I have combated this improper expression. This is because there are all kinds of woolliness; there is that which has the appearance of very stiff hair, while there are other kinds that resemble extremely encoiled hair. Properly speaking, it is therefore meaningless to characterize hair by the designation *woolly*, as all hair without exception can be compared on a woolliness basis.

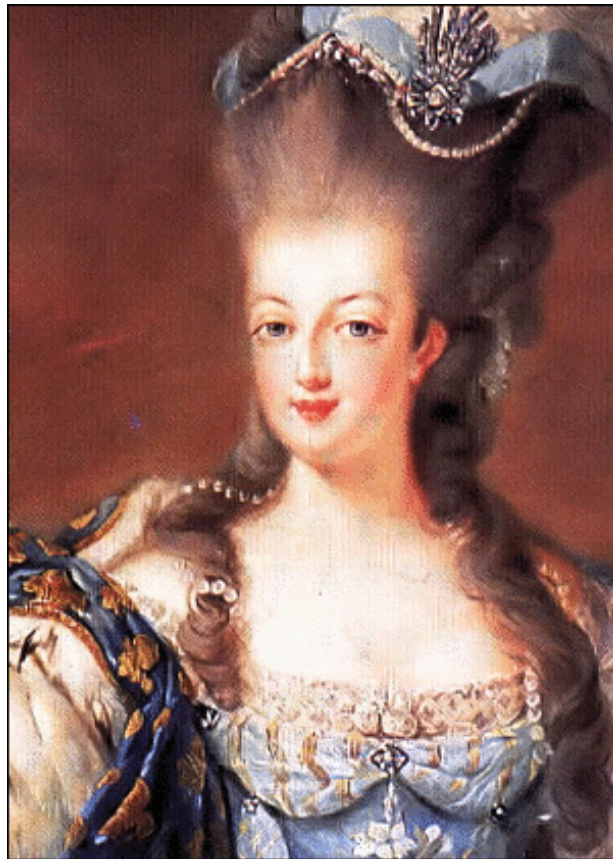
You have just shown us, Doctor Topinard, a large lock of hair that is white at its base, and you mentioned that this fact had very much surprised Professor Bert. This is, however, the way such fadings normally happen. Whitening at the tip is itself in opposition with the mode of production of hair, and can only be understood

by the action of outside influences. The luster of hair, which in part gives hair its color, is in reality due to the scalp-produced oil which is naturally glossy; one realizes that exposure to the air, rain, etc. can make this oil disappear, and modify in that way the color of the hair. The resulting decoloration will mainly occur at the end of the hair, but will just be slight, and cannot be compared to the old age whitening process that manifests itself only at the hair's base. Each hair generally grows colored, and its end remains such. At a given moment, though, it grows white, with its base then becoming white; however, one cannot understand how this single event will be sufficient to account for all the hair losing its color. The facts that some have cited against this point of view are very dubious. Thus, some have claimed that the hair of Marie Antoinette had turned white in one night; but, her correspondence with the Princess of Lamballe informs us that for a long time already her hair had been graying on the temples, something she had worked hard to carefully conceal while she was happy. When the various misfortunes overcame her, she neglected this coquettish precaution, and it was at that point that her hair gave the appearance to have all at once whitened.

**Doctor ARTHUR BORDIER.** One can, indeed, show oneself to be skeptical of the kind of superficial facts that you just noted, Professor Sanson. But some others—different, moreover, from the preceding on several points—have been observed scientifically. For example, I shall cite one observation of this genre that I made with Professor Gubler which concerned a married lady who was subject to quite violent and very long migraines; each attack on her lasted two or three days, and during this time her hair would grow white. Once the migraine passed away, her hair recommenced to grow brown, this constituting its normal color. The result was that her hair showed along its length alternating short white and brown parts, so that one could count on each strand the number of migraines this lady had experienced.

**Doctor PAUL TOPINARD.** I acknowledge, Professor Sanson, that the expression *woolly hair* is improper; but, the expression is allowed, and there are no sufficient grounds to change it. In science there exist other defective designations that we nevertheless maintain.

**Doctor PAUL BROCA.** With respect to the way in which white hair whitens, I am reminded of the following case that Blandin published. An elderly white-haired woman possessed a large cyst on the top part of her head; inside this cyst, which had been ever present during the woman's life, a quantity of very long hair was found, of which several strands were up to 1 meter in length. Near their free end they were fine and blond; in their middle part they were thicker and brown (this was the color of the woman's hair during her youthful days); finally, at their base they were white.



Marie Antoinette, before her imprisonment

**Madame CLÉMENCE ROYER.** Messieurs, you have enumerated all the case except the one which is the most frequent: that is to say, where most of the hair retains its natural color, with some hair at first, then a greater and greater number with age, becoming totally white from one end to the other, this occurring rapidly sometimes in a few days. This process is what brings about gray hair which is so common and which occasionally subsists up to the most advanced age. Any hair that whitens otherwise presents an exceptional case.

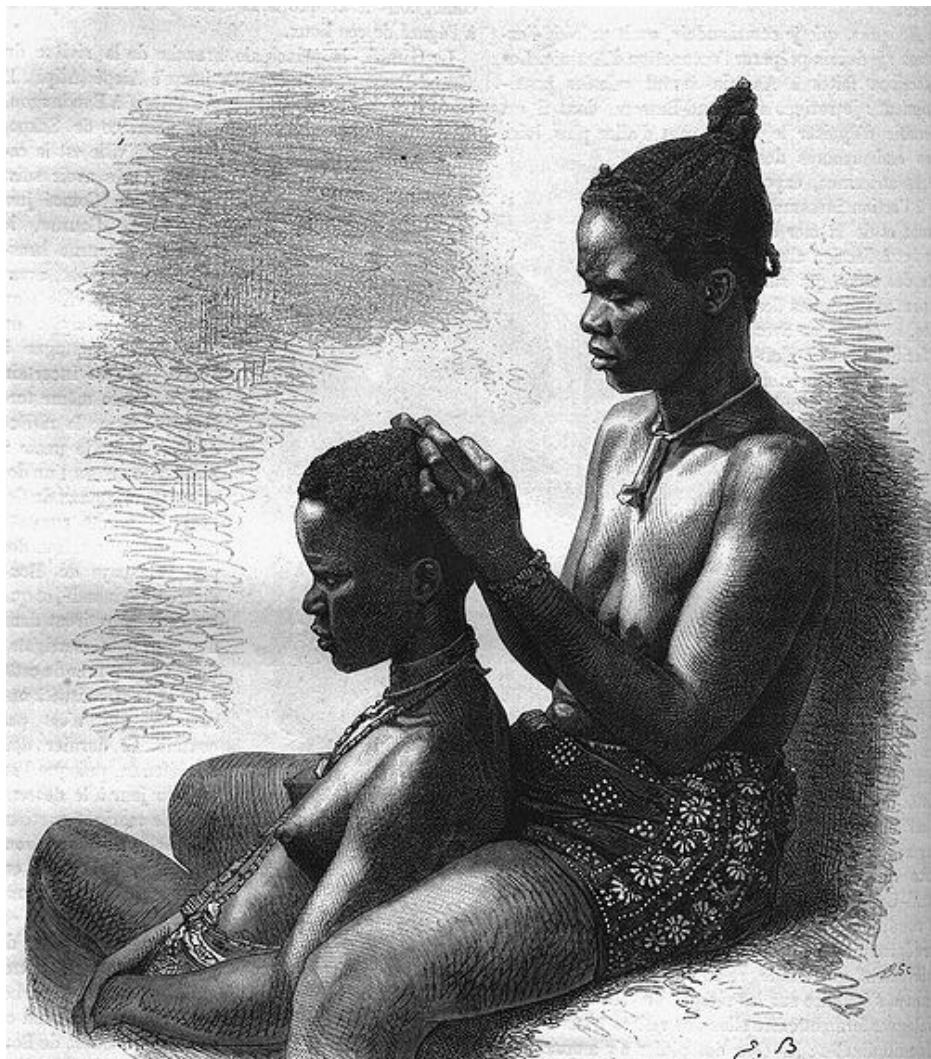
**Professor EUGÈNE DALLY.** Many explorers have reported the existence of races of men inhabiting, among other regions, Colombia that possess hair which never whitens. This report has been cited most notably by our colleague, Doctor Jourdanet. I wish to know if this finding is well proven and it is has been met with in other peoples.

**Doctor PAUL TOPINARD.** There are, indeed, other peoples, Professor Dally, of whom the same can be said, such as the Yuracares of South America, who live in forests that are nearly impenetrable to the rays of the sun, and where albinism is very frequent.

# On the Examination of a Negro from the Point of View of the Nature of the Hair

by Doctor Jacques Bertillon, Sr.  
(Past President, 1878, Anthropology Society of Paris)

Robert K. Stevenson: Translator and Editor



Negro mother and daughter showing the *peppercorn* configuration of their hair

# **“On the Examination of a Negro from the Point of View of the Nature of the Hair”**

**by Doctor Jacques Bertillon, Sr.**

ANTHROPOLOGY SOCIETY OF PARIS

Meeting of March 7, 1878

Messieurs, you have directed a commission composed of Doctor Bordier, Doctor Topinard and myself to examine the hair of a male Negro who currently is a patient at the Hôpital de la Charité. This Negro's hair, as you recall, had earlier been studied by Doctor Topinard.

You well know, messieurs, the importance that many of us have always attributed to the nature of the hair and its manner of embedment in order to make a distinction between the different races of mankind. Of the famous naturalists, Bory de Saint-Vincent and later on Huxley, Haeckel and several others have even, just based upon this sole characteristic, founded a classification of the human races.

We are accustomed to distinguishing among Negroes possessing woolly hair two modes of embedment of the hair; in the first case the hairs are uniformly and regularly distributed over the surface of the skull, whereas in the second the hair emerges from the scalp in isolated tufts that are surrounded by smooth spaces, a bizarre configuration that some have likened to the arrangement of a brush's bristles. This odd-looking mode of embedment of the hair is the one that has been ascribed to the Hottentots.

Can it be that this latter mode of embedment portrayed by travelers to Africa, in fact, does not exist? Is it possible that the travelers have been duped by an illusion resulting from a much too superficial examination? These are the questions that instigated our examination of the Negro initially studied by Doctor Topinard.

At first sight, it seemed perfectly evident that the Negro's scalp was embedded by disjointed tufts of hair. It was not only on the head that we observed this as well. In any event, here the hair is so abundant and padded that the *peppercorn* configuration does not present upon the head the same illusion as it does in other places where the hairs are more sparse. It is on the nape of the neck, the cheeks, the stomach and groin area, and above all on the chest that the hairs look like tufts separated one from the other by about 5 to 10 millimeters, depending on the region. This appearance is so obvious that, in the absence of Doctor Topinard, our initial impression was that the hair of this Negro manifested the same mode of embedment that has been attributed to the Hottentots, and which I described earlier.

However, our learned colleagues has cautioned us that this is but an illusion, that this misleading appearance results from the inextricable tangle of hairs of this Negro, who is completely ignorant of our practices of cleanliness. We therefore tried to disentangle these small tufts of hairs with the aid of a stylet; but this attempt was not demonstrative.

One other experiment, much more decisive, was performed on the nape of the neck of this Negro. The peppercorn configuration of the hair here is quite apparent. We shaved one part of these hairs, and left the others in their original condition. The contrast was very striking; we saw, in the shaved area, the roots of the hair laid out most regularly in horizontal rows spaced about 1 or 2 millimeters apart from one another, and it was clearly evident that the brush bristle configuration that we thought we had observed before employing the razor was a mere illusion.

We have repeated this experiment on the Negro's groin area, and observed exactly the same thing.

It is therefore possible that the arrangement of the hair in isolated tufts that people ascribe to the Hottentots is but the result of an analogous error. A good comb-out probably would do justice to the Hottentot's appearance.

The Negro singled out by Doctor Topinard is not, however, a Hottentot. He was born in Barra in Brazil; hence, it is difficult to state precisely his origin. According to Doctor Topinard, though, he is probably of Kaffir extraction.

We examined the Negro from top to bottom. The only peculiarity that we found worthy of interest was a certain discoloration of the skin at the level where the testicles of this individual rest against the inner face of his thigh. On a white person this place is often darker than neighboring areas; with this Negro, it is the contrary. The scrotum itself is, moreover, a rich black color.

I then proceeded to see if this lightening up of the black color occurred at other depressions of the Negro's skin. However, I found exactly the opposite.

## DISCUSSION

**Doctor PAUL TOPINARD.** In a previous meeting I named Monsieur Macklucko-Macay and Monsieur Meyer as having spoken out against the assestion that the hair of the Papuans of New Guinea is embedded as tufts that are separated by smooth, hairless intervals. I shall add that Doctor Comrie and Monsieur Alberti, who after having focused their attention upon this very matter during their recent

travels in Papua, are of the same opinion. Monsieur Moseley can be cited next, although his observations deal with the natives of the Admiralty Islands, which border New Guinea. After having verified that their body is covered with frizzy, black hairs that appear to grow in isolated tufts, he wrote the following: "This appearance is probably due to the fact that the hairs, although distributed uniformly in terms of their roots, combine together through their shafts to form curls; it goes without saying that concentrations of hairy follicles manifest themselves at certain points, which give rise to scattered tufts, a peculiarity that from the very beginning we supposed existed on the scalp of the Papuans."

As far as the Bushmen and Hottentots are concerned, I can also relate some testimonials. For starters, Cuvier, such a good observer, does not mention finding hairless intervals on the head of the female Bushman that he studied. Jeffries Weyman, a most distinguished American anatomist, did not say a word about such hairless intervals with respect to the young Hottentot of whom he produced a description. Flower and Murrie are absolutely affirmative on this matter in their work pertaining to the dissection of a female Bushman in 1867. "A careful examination of the scalp," they wrote, "permitted us to assure ourselves that the hair did not grow out in separate spots surrounded by smooth spaces, as some have maintained, for we found the hair roots to be uniformly disseminated." Lastly, today even, with Doctor Hamy, we have examined at the Museum a Hottentot child of about eight years of age who is preserved in alcohol; his short, frizzy hair was embedded in a regular manner across the entire surface of the scalp without allowing for intervals. As for the Negro at the Hôpital de la Charité, just as Doctor Bertillon has noted, we shaved the subject's hair in two places: the lower abdomen and nape of the neck, after having first of all clearly determined that the hair expresses to the highest degree at these points the characteristic tufts, apparently isolated, as Barrow has described. The exact points where the hairs were embedded thus became visible, in the form of small, dark dots or short projections. Well, messieurs, these points were equally spaced from 1 to 2 millimeters apart in parallel lines which now and then converged, and, these points more or less drew nearer to one another depending on the hairiness of the region. Each tuft was therefore only the fortuitous result of a coming together of the spiral turns of several neighboring hairs.

Accordingly, I must conclude, like I did last meeting, that the aspect of tufts really exists, but that with the Negro we studied it is not the result of an embedment of hairs in isolated bunches. Consequently, one is not able to emphasize this quality in order to divide the *Eulotrich* Negroes into two groups, the *Lophocomi* and the *Eriocomi*, as Professor Haeckel has done.

For my own part, I believe that uncombed fleecy hair always masses itself

together into small balls, varying in size from the peppercorn to the pea (Livingstone's comparison), in twisted locks or cords, depending on the hair's length. But, the peppercorn appearance, the so-called bristles of a brush aspect, occurs more readily in proportion as the hair is the following: less abundant on the surface of the head or body, naturally or artificially shorter, and less combed.

**Doctor ARTHUR BORDIER.** As Doctor Bertillon has pointed out, upon first viewing the subject, it appeared that the Negro's hair was embedded in the manner of peppercorns, but a second examination revealed to us that his individual hairs were aligned in parallel lines. Therefore, with this man, there is no possible doubt. One can also observe poodles who possess hair that has a peppercorn arrangement, but if one pays more attention to the dog's hair by looking at it closely, one will notice that each hair is embedded in the same way as is the case with the Negro.

However, it must not be inferred that there is no human race that presents the hair's embedment in islets. Research has been conducted on the Mincopies of the Andamans. As they shave themselves, it is possible to see how their hair grows. And, it has been ascertained that the hair of the Mincopies grows in distinct islets like the bristles of a brush; consequently, this examination has provided a different result.

Many reliable observers have noted in India this disposition of the hair among certain short, dark tribes. This may also originate from a parasitic malady.